

AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. § 1.121 the following claim will replace all prior versions of the claim in the application.

1. (Currently Amended) An image processing method for evaluating matching between a template image and an input image by use of a similarity value map, comprising:

generating a first evaluation vector for said template image, said first evaluation vector based on a normalized edge normal direction vector for said template image;

generating a second evaluation vector for said input image; and

performing an even-number times angular transformation on a component of an edge normal direction vector of said first and second evaluation vectors.

2. (Currently Amended) An image processing method comprising:

inputting a specified image for a template image;

inputting a specified image for an input image;

calculating ~~an~~ a first edge normal direction vector of said specified image for said template image;

calculating a second edge normal direction vector of said specified image for said input image;

normalizing said first edge normal direction vector;

5. (Original) The image processing method of Claim 2, further comprising normalizing said evaluation vector with respect to a vector length.
6. (Original) The image processing method of Claim 2, further comprising normalizing said evaluation vector of said template image by the number of edge normal direction vectors.
7. (Original) The image processing method of Claim 2, further comprising:
 - reducing a data amount using complex conjugate properties of orthogonal transformation before performing a product sum calculation; and
 - restoring said data amount after performing said product sum calculation.
8. (Original) The image processing method of Claim 2, further comprising:
 - enlarging/reducing said template image to various sizes; and
 - subjecting said evaluation vector of each size to addition processing.
9. (Original) The image processing method of Claim 8, wherein, for said template image, said addition processing of said evaluation vector is carried out after executing said step of compressing each evaluation vector so as to reduce the processing amount.
10. (Original) The image processing method of Claim 2, wherein said template image is an image of a typified face.

15. (Original) The image processing method of Claim 10, further comprising generating a map of point biserial correlation coefficients on the basis of an extracted face image; and

responsive to said correlation coefficients, calculating a position of said face part.

16. (Original) The image processing method of Claim 10, further comprising:

calculating a distribution of projection values in a y-direction on the basis of said extracted face image by use of said mask pattern;

calculating two maximum points from said distribution; and

outputting a range between said two maximum points as a mouth range.

17. (Original) The image processing method of Claim 10, further comprising:

dividing said input image into only said face image and parts other than said face image on the basis of said extracted face image;

embedding a digital watermark only into said face image;

combining said face image into which said digital watermark has been embedded with parts other than said face image to produce a combined result; and

outputting said combined result.

18. (Original) The image processing method of Claim 10, further comprising:

dividing said input image into only said face image and parts other than said face image on the basis of said extracted face image;

editing only said face image;

subjected to said orthogonal transformation and has been obtained for said template image and said input image; and

an inverse orthogonal transformation ~~means~~ unit;

~~said inverse orthogonal transformation means including means for subjecting~~ operable to subject a result of said product sum calculation to inverse orthogonal transformation and generating further operable to generate a map of similarity values;

said evaluation vector including a component in which an edge normal direction vector of a specified image undergoes even-numbered times angular transformation, and a formula of said similarity values, said orthogonal transformation, and said inverse orthogonal transformation each have linearity.

20. (Currently Amended) The image processing apparatus of Claim 19, wherein said template image processing part includes a recording ~~means for recording~~ unit operable to record said evaluation vector that has been compressed to reduce a processing amount and that has been subjected to orthogonal transformation, and a result obtained by compressing said evaluation vector that has been subjected to orthogonal transformation is stored in said recording ~~means~~ unit before inputting said input image.

21. (Currently Amended) The image processing apparatus of Claim 19, further comprising:

a conjugate compression ~~means~~ unit between said recording ~~means~~ unit and said multiplication ~~means~~ unit;

an image synthesizing ~~means for combining~~ unit operable to combine said face image into which said digital watermark has been embedded with parts excluding said face image and outputting the combined data.

31. (Currently Amended) The image processing apparatus of Claim 19, further comprising:

a face image cutting-out ~~means for separating~~ unit operable to separate an input image into only a face image and parts excluding said face image on the basis of an extracted face image;

an image correction ~~means for editing~~ unit operable to edit only said face image; and

an image synthesizing ~~means for combining~~ unit operable to combine an edited face image with parts excluding said face image and outputting them.

32. (Original) The image processing method of Claim 10, further comprising:

cutting out a face image from said input image on the basis of an extracted face image;

extracting a facial inner image from said face image that has been cut out;

calculating a feature that correct said face image on the basis of said extracted face image;

determining a correction function on said basis of said obtained feature; and

applying image correction based on said determined correction function at least onto said face image that has been cut out.

